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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/462,441	03/20/2000	HANS-JOSEF GIERTZ	PS-12626	5095

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EXAMINER

WACHTEL, ALEXIS A

ART UNIT	PAPER NUMBER
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1764

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DATE MAILED: 03/28/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/462,441

Applicant(s)

GIERTZ ET AL.

Examiner

Alexis Wachtel

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 March 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 16-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 16-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 January 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 7.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Detailed Action

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 19 and 23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 19 recites the limitation "sealing plates". This limitation lacks antecedent basis.

3. Regarding claim 23, Applicant does not clearly describe what is meant by the phrase "wherein said housing is formed by said sealing plates and said side segments of said leveler bar". In claim 16, Applicant describes the "housing" as separate and distinct from the leveler bar. As a result, how can the leveler bar be made of the side segments of the leveler bar. Examiner interprets Claim 23 as a housing that surrounds sealing plates and side segments of said leveler bar.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 24,25 and 28 are rejected under 35 U.S.C. 102(b) as being anticipated by US 4,264,263 to Richmond Jr.

Richmond Jr. discloses an apparatus similar to Applicant's that comprises:

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Per claim 24:

- a housing (20) connectable to a leveler door opening (12) so as to form a seal;
- said door opening defined by cross sectional area of said coke oven chamber (10);
- a leveler bar (16) guided into said leveler door opening including at least two side segments (50,52) and at least one cross segment (54) connecting said two side segments;
- said housing provided with means for sealing said cross-sectional area of said leveler door opening (C3/L29-50).
- At least one movable sealing element for sealing an inner cross section of said leveler bar between said side segment (C3/L29-50).

Per claim 25:

- wherein said movable sealing element is at least one rotary lock (Fig.4)

Per claim 28:

- wherein said movable sealing element is at least one movable roller (Fig.4)

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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7. Claims 16,18,19,20,21,22,23 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 4,264,263 to Richmond Jr. in view of DE2364458C3 further in view of US 5,925,829 to Laragione et al and

Richmond Jr. discloses an apparatus similar to Applicant's that comprises:

Per claim 16:

- a housing (20) connectable to a leveler door opening (12) so as to form a seal;
- said door opening defined by cross sectional area of said coke oven chamber (10);
- a leveler bar (16) guided into said leveler door opening including at least two side segments (50,52) and at least one cross segment (54) connecting said two side segments;
- said housing provided with means for sealing said cross-sectional area of said leveler door opening (C3/L29-50).

Per claim 16, Richmond Jr as set forth above fails to teach that the apparatus includes a regulable exhaust fan connected to said housing and flow measuring means at a location within said housing. DE2364458C3 teaches that it is known for leveler bar housing to be connected to both a forced draught fan and an exhaust fan. The fans prevent the emission of charging gases through the leveler door opening (See Applicant's Specification for DE2364458C3 disclosure, pp.2, lines 19-35). In view of this teaching it would have been obvious for one of ordinary skill to have included at least one fan connected to the leveler bar housing motivated by the desire to decrease the emission of charging gases.

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Additionally, in regards to claim 16, Richmond Jr and DE2364458C3 as set forth above fails to teach that a flow measuring means is connected to the leveler bar housing. Laragione et al teaches that flow meters are well known (Abstract). Such flow meters can be used to measure the rate of change of pressure of gas flowing into or out of a closed system (C1/L65-66). Since the exhaust system disclosed by Richmond Jr, and DE2364458C3 operates with a coke oven as a closed system isolated from the environment to prevent the emission of pollution, it would have been obvious for one of ordinary skill to have incorporated a flow measuring means into the leveler bar housing motivated by the desire to provide sensor data to an operator indicating the performance characteristics of the exhaust system as disclosed by Richmond Jr, and DE2364458C3.

Per claim 18, Richmond Jr, DE2364458C3 and Laragione et al as set forth above fails to teach:

- at least two sealing plates arranged within said housing to seal said leveler bar from above and below over an area said two cross segments and including sealing means for sealing said side segments of said leveler bar adjacent said leveler door opening.

Richmond Jr teaches the use of sealing rollers (Examiner interprets rollers as a form of plates) that engage a leveler bar on its top surface as well as both side surfaces. The sealing rollers are not adjacent to the leveler bar door opening (Richmond Jr, Fig.3,4 and 5, C3/L51-68, C4/L1-9). In addition, a counterweighted swing gate (108) is provided to engage the leveler bar on its bottom surface (Richmond Jr, C5/L12-18).

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Since Richmond Jr teaches that a leveler bar can be surrounded on its top, bottom and side surfaces with sealing mechanisms to prevent any air leaks, it would have been obvious for one of ordinary skill to have further improved the sealing plate housing by positioning the sealing plates adjacent to the leveler bar door opening.

Per claim 19:

- wherein said sealing plates and said sealing strips are provided with press-on means (Richmond Jr, Fig.4) (Examiner interprets sealing strips and sealing plates as the same).

Per claim 20:

- wherein said sealing plates are held in said housing by a partial vacuum, said vacuum pressing said sealing plates against said leveler bar (Examiner takes the position that since the sealing plates function as air locks, at least some vacuum is present in the sealing plates vicinity during their operation. Such a vacuum would inherently affect the operation of the sealing plates).

Per claim 21:

- wherein said sealing plates are beveled (Richmond Jr, Fig.4 item 122).

Per claim 22, Richmond Jr, DE2364458C3 and Laragione et al fails to teach:

- a plurality of said sealing plates and a plurality of said sealing strips being arranged one behind the other in an axial direction, said axial direction defining a thrust direction for said leveler bar.

However, since the sealing plates and sealing strips (taken by examiner to be the same) operate as airlocks to prevent emissions of harmful gases during a coke pushing

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session, it would have been obvious for one of ordinary skill to have duplicated the airlock effect of the sealing plates/sealing strips by using additional sealing plates/sealing strips oriented one after another in an axial direction, said axial direction defining a thrust direction of the leveler bar. *St.Regis Paper Co. v. Bemis Co., Inc.*, 193 USPQ 8,11 (7th Cir. 1977).

Per claim 23, Richmond Jr discloses that the leveler bar and sealing plates are contained in a housing (Richmond Jr, Fig.2).

Per claim 29:

- A method for sealing a leveler door opening of a coke oven chamber during the leveling process, including providing a housing and guiding a leveler bar there through, forming a seal between said leveler door opening and said leveler bar (Richmond Jr, Col 5, lines 7-20).

8. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over US 4,264,263 to Richmond Jr. in view of DE2364458C3 further in view of US 5,925,829 to Laragione et al and US 5,114,542 to Childress et al.

Per claim 17, the references as set forth above fail to teach:

- the use of an exhaust fan including an outlet connected to an adjacent coke oven chamber.

Childress et al teaches the concept that a battery of coking ovens can be connected by a common flue gas ducting system running along the top of the coking battery (C2/L24-39). Since the references as set forth above and Childress et al are commonly directed to solving the problem of coke oven exhaust problems, it would have

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been obvious for one of ordinary skill in the art to have pumped exhaust gas from an immediate coke oven chamber to an adjacent, operating coke chamber motivated by the desire to prevent the emission of toxic gases into the atmosphere.

9. Claim 26,27 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 4,264,263 to Richmond Jr. in view of US 3,859,066 to Trutzschler.

Per claim 26, Richmond Jr. as set forth above fails to teach:

- said at least one movable sealing element is at least one cell wheel.

Trutzschler is directed to dust manipulation mechanisms and teaches the use of a cell wheel as an airlock (Col 2, Lines 60-68). Since both Richmond Jr and Trutzcher are directed to means of controlling the movement of particulate matter, it would have been obvious for one of ordinary skill to have employed a cell wheel in Richmond Jr's apparatus in its housing motivated by the desire to use additional known and effective airlock devices.

Per claim 27:

- at least one sealing plate being arranged in said housing (Richmond Jr, Fig.2, item 102).

Conclusion

10. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Alex Wachtel, whose number is (703)-306-0320. The Examiner can normally be reached Mondays-Fridays from 10:30am to 6:30pm.

If attempts to reach the Examiner by telephone are unsuccessful and the matter is urgent, the Examiner's supervisor, Mr. Glenn Caldarola can be reached at (703) 308-6824. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Alex Wachtel
Aw



Glenn Caldarola
Supervisory Patent Examiner
Technology Center 1700